

Supplementary Material (ESI) for Lab on a Chip

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Supplementary Information for: Sub-pixel resolving optofluidic microscope for on-chip cell imaging

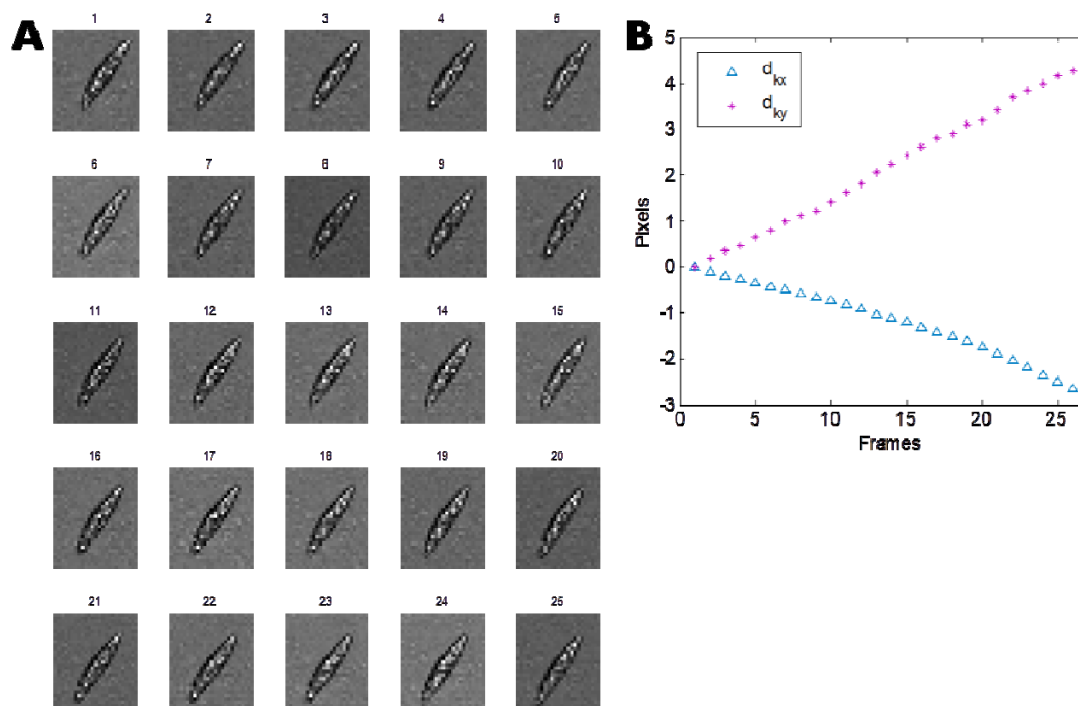
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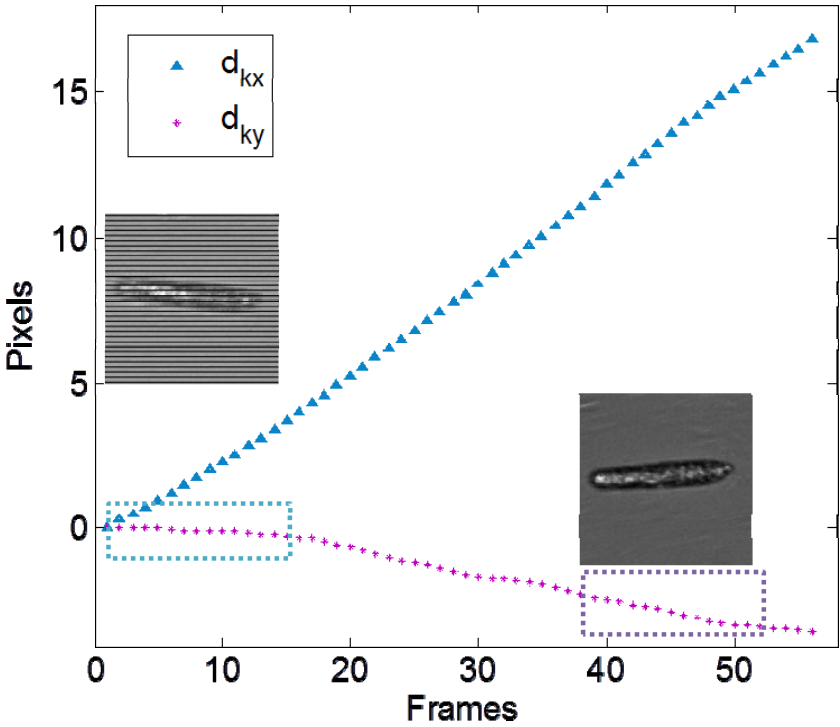
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Fig S1. Motion of an *Euglena gracilis* cell over 25 frames (a) and the motion vector obtained via our tracing program (b).



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Fig S2. Motion vector for *Euglena gracilis* corresponding to Fig 2A (A2, A3)



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Fig S3. Rotation angle measured for the *Euglena gracilis* in Fig 3B by the angle of the microorganism.

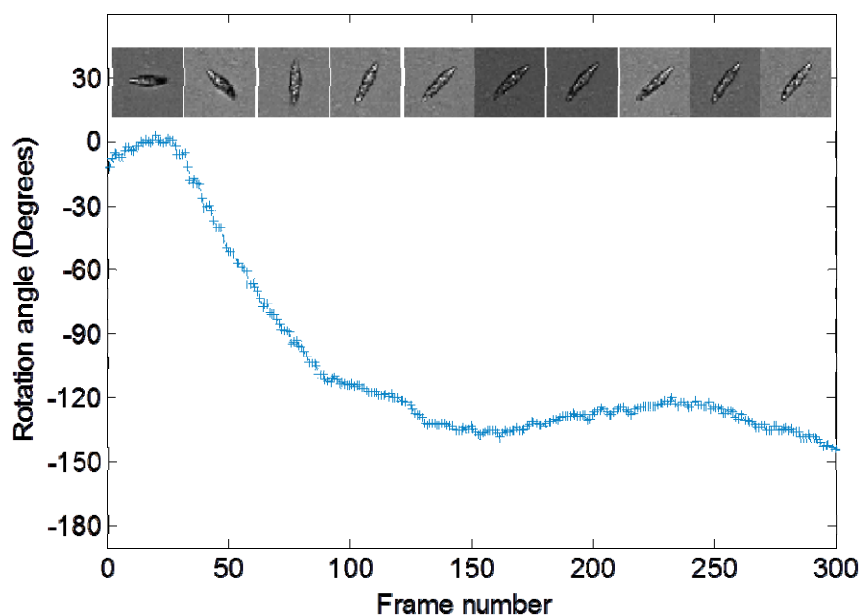
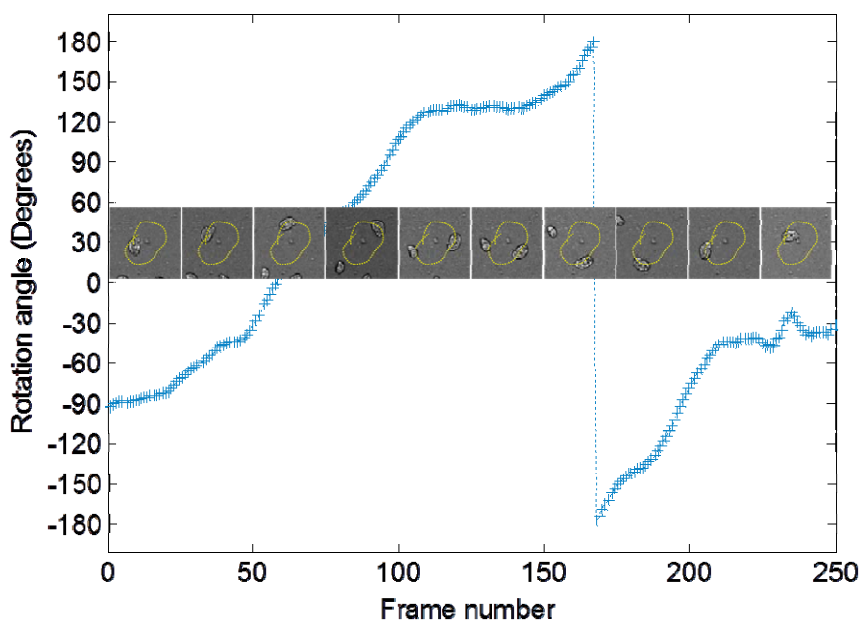


Fig S4. Rotation angle measured for the *Euglena gracilis* in Fig 3C by the displacement of the *Euglena gracilis*. The yellow line in inset indicates the trace of the cell in the sequence.



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Table S1. Cell counting results and percentage difference between the machine count and two manual count results.

	Machine	Observer A	Observer B	Machine-A (%)	Machine-B (%)	A-B (%)
Image 1	112	112	110	0.00	1.80	1.80
Image 2	121	115	119	5.08	1.67	3.42
Image 3	115	117	117	1.72	1.72	0.00
Image 4	102	105	107	2.90	4.78	1.89
Image 5	99	102	99	2.99	0.00	2.99
Image 6	94	97	94	3.14	0.00	3.14
Image 7	103	111	101	7.48	1.96	9.43
Image 8	169	157	161	7.36	4.85	2.52
Image 9	157	154	150	1.93	4.56	2.63
Image 10	187	199	193	6.22	3.16	3.06
Image 11	219	222	233	1.36	6.19	4.84
Image 12	196	197	194	0.51	1.03	1.53
Image 13	239	245	239	2.48	0.00	2.48
Image 14	282	302	292	6.85	3.48	3.37
Average				3.57	2.51	3.08